



1/9

| -- A HELIX - | ----- B HELIX ----- | C HELIX |
 *
 SWMb
 HemAT-Hs
 HemAT-Bs

 42
 60
 61

| D HELIX | ----- E HELIX ----- | -F HELIX
 *
 SWMb
 HemAT-Hs
 HemAT-Bs

 92
 122
 122

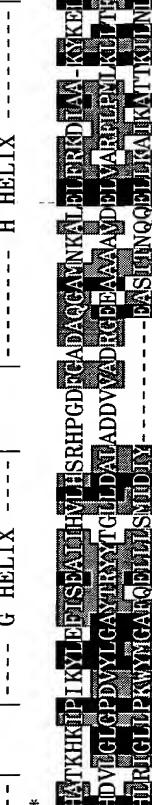
| - G HELIX ----- H HELIX - |
 *
 SWMb
 HemAT-Hs
 HemAT-Bs

 153
 184
 175

FIG. 1A

TECH CENTER 1600/2900

Alt. 11 2003

RECEIVED



2/9

K1

		***	***	***	***
Tsr	LMRTYGDVRNGANANIMSGASEIATGNNDDESSRTEQCAASIEETAAASMEQLTATVKQNAENAR				324
HemAT-Hs	LEATISQDVAAERTDTNIRARTDDQVDRMADVSREIISYSSASVVEVASTADDVVRRTSEDAEAIAQ				283
HemAT-Bs	LHQKIQETSGSIANLESETSRSVQELNDKSEGISQASKAGTVTSSTWEEKSIGGKKELEVQQ				259

HCD

		386
Tsr	QASHIALSASETAQRCGCKYDNNVQTNRDISTSSQKLAELTISVIDGIAFQTNTULALNAIA	
HemAT-Hs	QGEAAADDALATNTDDEADIDGVTAGVEQLGERAADMESVTGVIDDIAEQTNMLALNASIEA	345
HemAT-Bs	K-----QNNKIDTSEVQTEKEVNRVLDIAGAEKIEGTVGIAEQTNELSLNASIES	311

HCD

		448
Tsr	ARAGEQGRGFAVVADEVRLAQRSAQAAREIKSLIEDSVGKVGVGSLVSEAGETMAEIVSA	
HemAT-Hs	ARAGEAGEFAVVADEVKALAAEESREQSTRVEELVQMQAETETVDQDDEVNQIGFVER	407
HemAT-Bs	ARAGEHGKGFAVVADEVRLKSEDETRKKTVSTVSELV-----NNNTNTQINIVSKHJKDANEI	366

R1

		510
Tsr	VTRVTDINGEIASASDEQSRLGIDQVGLAVAEMDRVTQQNAAVVEESAAAAAALEEQASRLTE	
HemAT-Hs	VEEAMETIQEITDAVEDASQCMQEVSTATDEQAVSTENYAEVMDGYDDRAGEIAAALDIAAD	469
HemAT-Bs	VSESEKEKMTQINRLEDELMASMKISKEQSGKIDVPLQARLGELQEVSRAVSHVAASVDSLVI	428

		536
Tsr	AVAVFRIQQQFETSAVXTVTPAAP	
HemAT-Hs	AT-----DQQWRTVEETVKGES	489
HemAT-Bs	ET-----EE	432

TECH CENTER 1600/2900

FIG. 1B

Att. 11 2003

RECEIVED

O I P E JC95
AUG 07 2003
PATENT & TRADEMARK OFFICE

3/9

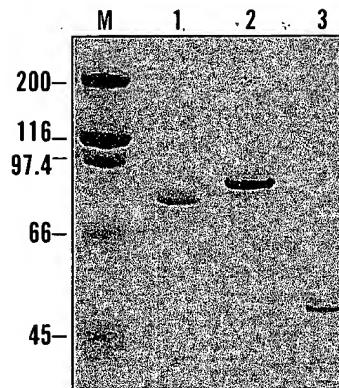


FIG. 2A

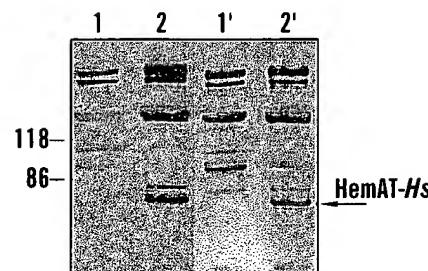


FIG. 2B

RECEIVED
AUG 11 2003
TECH CENTER 1600/2900



4/9

MYOGLOBIN-LIKE PROTEIN (M_bLP)

<u>TEMPLATE</u>			
<u>GQIVLVLIKXAPLIIQNKXKXXDFFKH</u>	<u>M1-BOX</u>	<u>AQRXRLAQIHXAXKGKIPDWYL</u>	<u>M2-BOX</u>
	<u>SEQ. ID. NO. 82</u>		<u>SEQ. ID. NO. 83</u>
<u>LIKXTVPVLIKXEHGXKI</u>	<u>H-BOX</u>	<u>GODVLLVLIKXANPEIQQKFFFKH</u>	<u>M1-BOX</u>
	<u>SEQ. ID. NO. 84</u>		<u>SEQ. ID. NO. 85</u>

THE TWO SEQUENCES USED IN THE ANALYSES. M1 AND M2 ARE THE SITE OF MYOGLOBIN RECOGNITION. M2 IS THE SITE OF HEMAT RECOGNITION. THE H-BOX IS THE SITE PRIMARY OF MICROBIAL HEMOGLOBIN RECOGNITION.

RECEIVED
AUG 11 2003
TECH CENTER 1600
U.S. PATENT AND TRADEMARK OFFICE

FIG. 3

O P E JC92
AUG 07 2003
PATENT & TRADEMARK OFFICE

5/9

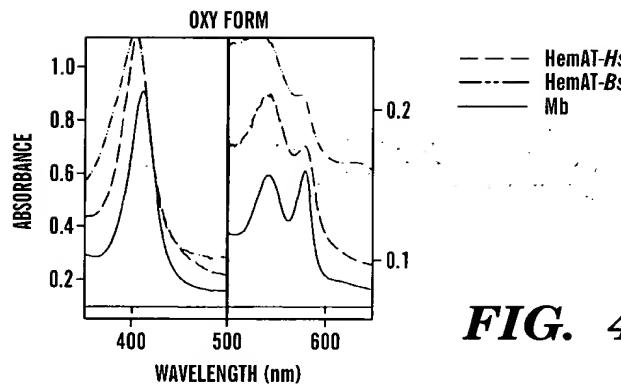


FIG. 4A

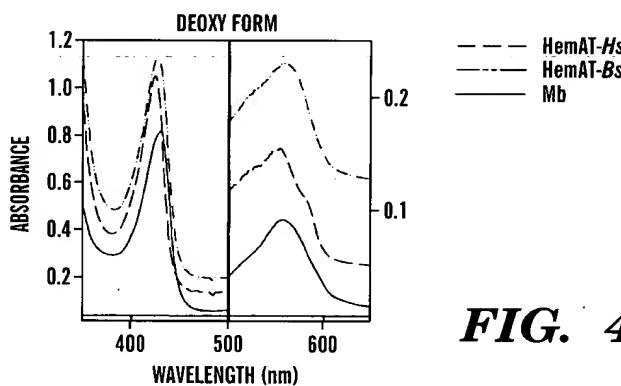


FIG. 4B

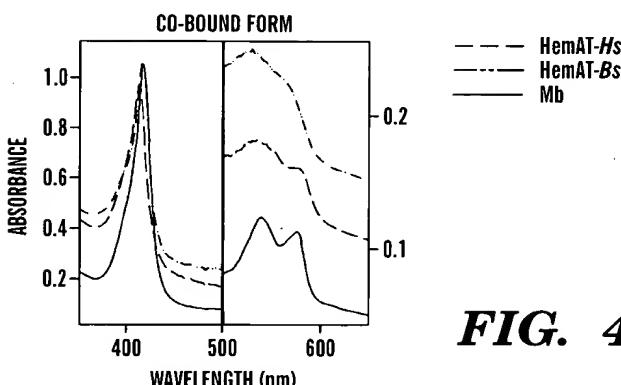
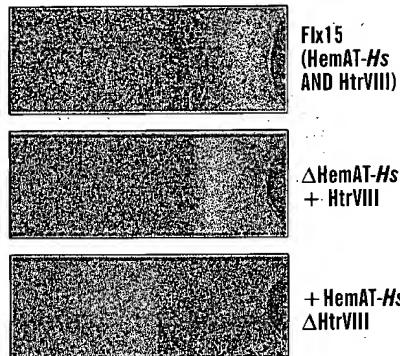


FIG. 4C

RECEIVED
AUG. 11 2003
TECH CENTER 1600/2800

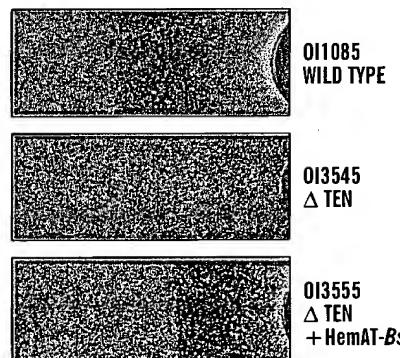


6/9



H. SALINARUM

FIG. 5A



B. SUBTILIS

FIG. 5B

RECEIVED
AUG 11 2003
TECH CENTER 1600/2900

O I P E JCS5
AUG 07 2003
PATENT & TRADEMARK OFFICE

7/9

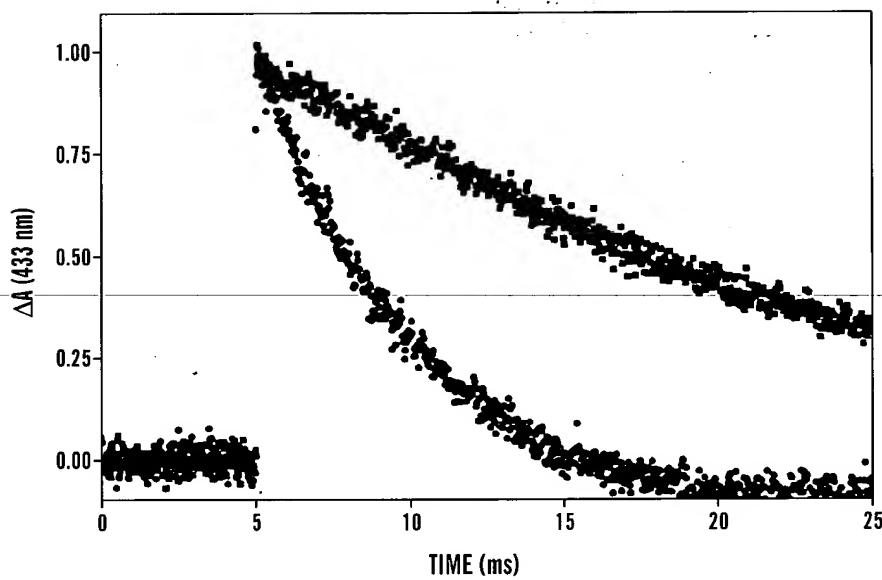


FIG. 6

RECEIVED
AUG 11 2003
TECH CENTER 1600/2900



8/9

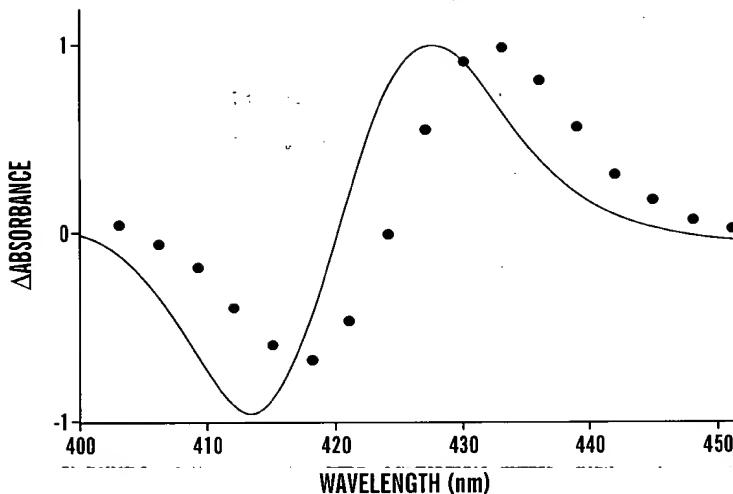


FIG. 7A

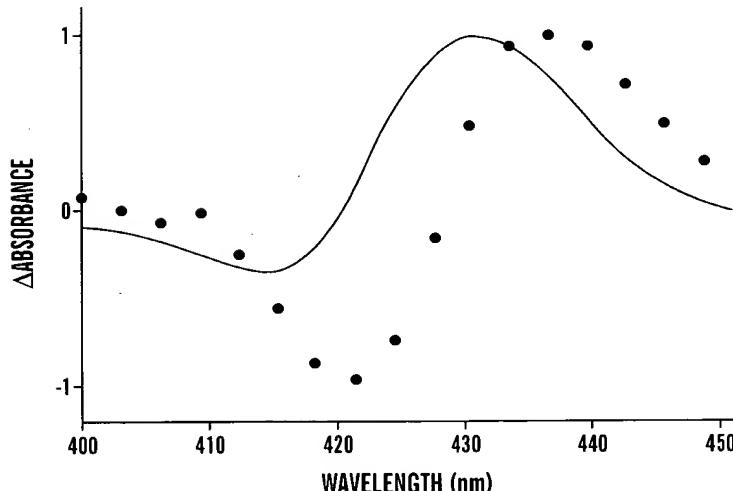


FIG. 7B

RECEIVED
AUG 11 2003
TECH CENTER 1600/2900

O I P E JC95
AUG 07 2003
PATENT & TRADEMARK OFFICE

9/9

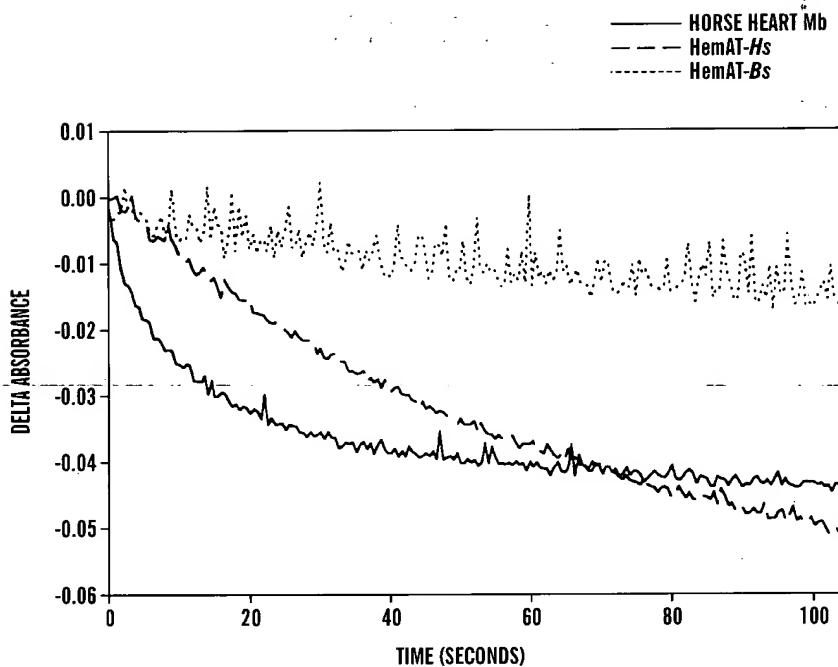


FIG. 8

RECEIVED
AUG 11 2003
TECH CENTER 1650
U.S. PATENT AND TRADEMARK OFFICE